INFORMATION DISCLOSURE PSYATEMENT

Applicant(s): William F. Kaemmerer

Filing Date: 25-Nov-03 Group:

Serial No.: 10/721.693

0

JUN 1 3 200

US PATENT DOCUMENTS

Atty Docket No: P11089.00

(B)	.67		JS PAT	ENT DOCUMENTS			
CONTRACTOR INTERPRETATION	ARRE/*	Document Number	Date	Name of Patentee or Applicant of Cited Document	Class	SubClass	Filing Date If Appropriate
120		US 2001/0027309 A1	04-Oct-01	Elsberry, Dennis D.			01-Jun-01
20		US 2002/0068093 A1	06-Jun-02	Trogolo, Jeffrey A., et al	424/618		29-Aug-01
30		US 4683195	28-Jul-87	Mullis, Kary B., et al	435/6		07-Feb-86
30		US 4683202	28-Jul-87	Mullis, Kary B.	435/91		25-Oct-85
Ju		US 4800159	24-Jan-89	Mullis, Kary B., et al	435/172.3		17-Dec-86
42		US 4965188	23-Oct-90	Mullis, Kary B. et al	435/6		17-Jun-87
JW.		US 5354326	11-Oct-94	Comben, Richard H. et al	607/115		27-Jan-93
30		US 5624803	29-Apr-97	Noonberg, Sarah et al	435/6		13-Oct-94
T L		US 5720720	24-Feb-98	Laske, et al.	604/49		15-Mar-96
30		US 5735814	07-Apr-98	Elsberry, Dennis D. et al.	604/43		30-Apr-96
30		US 5782892	21-Jul-98	Castle, Vernon P. et al	607/37		25-Apr-97
24		US 5814014	29-Sep-98	Elsberry, Dennis D., et al.	604/43	-	29-Jul-97
立と		US 6042579	28-Mar-00	Elsberry, Dennis D., et al.	604/891.1		30-Apr-97
<u> </u>		US 6093180	25-Jul-00	Elsberry, Dennis D.	604/506	-	18-Aug-97
よん		US 6180613	30-Jan-01	Kaplitt, et al.	514/44		06-Jun-95
વ ડ		US 6187906	13-Feb-01	Gluckman, et al.	530/331		15-Jun-99
ムを		US 6245884	12-Jun-01	Hook, Vivian Y.H.	530/300		16-Oct-98
JW		US 6281009	28-Aug-01	Boyce, Frederick M.	435/321.0		11-Sep-97
111		US 6300539	09-Oct-01	Morris, Christopher M.	800/9	_	
立し		US 6310058	30-Oct-01	Miller, et al.	514/212.08		25-May-00
40		US 6313268	06-Nov-01	Hook, vivian Y.H.	530/350		20-Apr-99
طلا		US 6319905	20-Nov-01	Mandel, et al.	514/44		19-May-99
44		US 6343233 B1	29-Jan-02	Werner, Robert I., et al	607/119		09-Sep-98
ユム		US 6372721	16-Арг-02	Neuman, et al.	514/44		30-Sep-99
-Iw		US 6376471	23-Apr-02	Lawrence, III, et al.	514/44		08-Oct-98
Pw		US 6436392	20-Aug-02	Engelhardt, et al.	424/93.2		25-Mar-99
ムム		US 6468524	22-Oct-02	Chiorini, John A.	424/93.21		22-Mar-00
14		US 6551290	22-Apr-03	Elsberry, et al.			31-Mar-00
-PU	<u> </u>	US 6594880	22-Jul-03	Elsberry, Dennis			23-May-01

LU EXAMINER	9/19	105	Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communciation to applicant.

* - Reference Previously cited and provided to the Examiner.

+ - New Reference not previously cited (available copies included).

Based on Form PTO-FB-A820 (Also form PTO-1449)

FOREIGN PATENT DOCUMENTS

Examiner Igitial	+/*	Document Number	Date	Name	Class	SubClass	Filing Date If Appropriate
5W		DE19938960 Abstract	22-Feb-01	Bisping, Hans-Jurgen	A61N 1/05		17-Aug-99
\$W		WO 00/30567	02-Jun-00	Healthshield Technologies, Inc.		-	16-Nov-99
AV		WO 00/64505	02-Nov-05	Healthshield Technologies, L.L.C.			27-Apr-00
3W		WO 01/16312A2	08-Mar-01	Ribozyme Pharmaceuticals, Inc.	C12N 15/11		30-Aug-00
SW		WO 01/49844 A1	12-Jul-01	Rutgers, The State Univ of NJ	C12N 15/11	·····	02-Jan-01
SW		WO 01/60794A2	23-Aug-01	The Regents of the Univ of CA	C07D	·	20-Feb-01
3.1		WO 01/91801 A2	06-Dec-01	Chiron Corporation	A61K 48/00		25-May-01
32		WO 03/047676 A1	12-Jun-03	Medtronic, Inc.	A61M 25/00		26-Nov-02
22		WO 03/053516 A1	03-Jul-03	Medtronic, Inc.	A61N 1/375		18-Dec-02
SW		WO 03/070895 A2	28-Aug-03	Ribozyme Pharmaceuticals	C12N		18-Feb-03
- PW		WO 03/099298 A1	04-Dec-03	Max-Planck Gesellschaft Zur Forde	61K 31/710		26-May-03
4~		WO 93/23569	25-Nov-93	Ribozyme Pharmaceuticals, Inc.	C12Q 1/68		29-Apr-93
SW		WO 94/02595	03-Feb-94	Ribozyme Pharmaceuticals, Inc.	C12N 5/22		02-Jul-93
Zw		WO 9618736	20-Jun-96	Ribozyme Pharmaceuticals, Inc.	C12N 15/52		22-Nov-95
32		WO 97/40874	06-Nov-97	Medtronic, Inc.	M 5/172, 5/		30-Apr-97
Zw		WO 99/50300A1	07-Oct-99	The Trustees of the Univ of PA	C07K 16/00		29-Mar-99
2~		WO2004/084955	07-Oct-04	Medtronic, Inc.			18-Mar-04
ZW.		WO2004/101063	25-Nov-04	Medtronic, Inc.			08-Mar-04
22		WO2004041101	21-May-04	Medtronic, Inc.			27-Oct-03

OTHER DOCUMENTS (Including Authors, title, Date, Pertinent Papers, etc.)

Examiner Initial	+/*	Document Cite
レレ		Aebischer, Patrick, Recombinant proteins for neurodegenerative diseases: the delivery issue, TRENDS in Neurosciences, Vol 24, No. 9, September 2001 pp 533-540
22		Caplen, Natasha J., et al.,, Rescue of polyglutamine-mediaed cytotoxicity by double-stranded RNA-mediated RNA interference, Human Molecular Genetics 11(2): 175-184 (2002)
WE		Chen et al., Multitasrget-ribozyme directed to cleave at up to nine highly conserved HIV-1 env RNA regions inhibits HIV-1 replication-potential effectiveness against most presently sequened HIV-1 isolates, Nucleic Acids Res., 20, 4581-4589, (1992)
マア		Chowrira et al., In vitro and in vivo comparison of Hammerhead, Hairpin and Hepatitis delta Virus Self- Processing Ribozyme Cassettes, Journal Biol. Chemistry, 269, pp 25856 - 25863 (1994)
77		Clark, H., et al., Purkinji Cell Expression of a Mutant Allele of SCA1 in transgenic mice leads to disparate effects on motor behaviorsk, followed by a proigressive cerebellar dysfunction and histological alterations, Journal of Neuroscience Vol 17 No. 19: pp 7385-7395 (1997)
した		Couture et al., Anti-gene therapy; the use of ribozymes to inhibit gene function, Trends in Genetics, 12(12); 510-515 (Dec, 1996)
47		Davidson, Beverly L., Molecular medicine for the brain: silencing of disease genes with RNA interference, The Lancet Neurology, Vol 3, March 2004, pp 145-149
ムル		Dropulic et al., Functional characterization of a U5 Ribozyme: Intracellular Suppression of Human Immunodeficiency virus Type I Expression, Journal Virology., 66(1), 1432-1441 (1992)
SW		Glorioso, Joseph C., Use of HSV vectors to modify the nervous system, Current Opinion in Drug Discovery & Development 2002 5(2): PharmaPress Ltd ISSN 1367-6733
WE	·	Good, et al., Expression of small, therapeutic RNAs in human cell nuclei, Gene Therapy, (1997) Vol. 4, No. 45 - 54

EXAMINER OF THE PROPERTY OF TH	alialos Date Considered

Examiner: Initial if reference coasidered, whether or not citation is in conformance with MPEP609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

* - Reference Previously cited and provided to the Examiner. + - New Reference not previously cited (available copies included).

Based on Form PTO-FB-A820 (Also form PTO-1449)

ムシー	Goto, J., et al., Suppression of Huntingtin Gene Expression by s1RNA: A Possible therapeutic Tool for Huntington's Disease, Neurology, Lippincoll Williams 7 Wilkins, Philadelphia, US, 60(5) Suppl 1, March 11 2003 p.A286
37	Hommel, J.D., et al., Local gene knockdown in the brain using viral-mediated RNA interference, Society for Neuroscience Abstract Viewer and Itinerary Planner 2003, Vol 2003, Abstract No. 325.14, November 8-12, 2003
34	Izant, Jonathan G., et al., Constitutive and Conditional Suppression of Exogenous and Endogenous Genes by Anti-Sense RNA, Science Vol 229, pp 345 (1985)
7n	Kaemmerer, W.F. and Puram, S., The potential for allele-specific reduction of ataxin1 expression using small, interfering RNA,
Sw	Kashani-Sabet et al., Reversal of the Malignant Phenotype by an Anti-ras Ribozyme, Antisense Res. Dev., 2:3-15 (1992)
30	Kitabwalla, Moiz, Ph.D., et al., RNA interfence - a new weapon against HIV and beyond, New England Journal of Medicine, 347(17), (Oct 24 2002) pp 1364-1367
10F	Klement, Ivan, et al., Ataxin-1 nuclear localization and aggregation: Role in polyglutamine-induced disease in SCA1 transgenic mice, Cell Vol. 95: pp 41-53 (1998)
32	L'Huillier, Phillip J., et al., Cytoplasmic delivery of ribozymes leads to efficient reduction in x-lactalbumin mRNA levels in C1271 mouse cells, EMBO Journal, Vol. 11, pp 4411-4418, No. 12 (1992)
ゴム	Lisziewicz et al., Inhibition of human immunodeficiency virus type 1 replication by regulated expression of a polymeric Tat activation response RNA decoy as a strategy for gene therapy in AIDS, Proc. National Acad Sci USA, Vol. 90, pp 8000-8004, (Sept. 1993)
30	Matilla, A., et al., Mice lacking ataxin-1 display learning deficits and decreased hippocampal paired-pulse facilitation, Journal of Neuroscience Vo. 18: pp 5508-5516 (998) No. 14
JW	McGarry, Thomas J., et al., Inhibition of heat shock protein synthesis by heat-inducible antisense RNA, Proc. National Academy Science, USA Vol 83, pp 399, Jan. 1986
22	McManus, Michael T., Gene Silencing in Mammals by Small Interfering RNAs, Nature Reviews / Genetics, Vol. 3 October 2002, pp737-747
2W	Miller, Victor M., Allele-specific silencing of dominant disease genes, PNAS, June 10, 2003, Vol. 100, No. 12, pp 7195-7200
SW	Naldini, Luigi, Efficient transfer, integration and sustained long-term expression of the transgene in adult rat brains injected with a lentiviral vector, Proc. National Academy Science, Vol. 93, pp 11382-11388, October 1996
22	Noonberg, et al., In vivo generation of highly abundant sequence-specific oligonucleotides for antisense and triplex gene regulation, Nucleic Acid Research, Vol. 22, pp 2830 - 2836, No. 14 (1994)
SW	Ohkawa, et al., Activities of HIV-RNA targeted riboyzmes transcribed from a shot-gun type riboyzme-trimming plasmid, Nucleic Acids Symp. Ser., 27, pp 15-16, (1992)
ゴル	Ojwang, Joshua O., et al., Inhibition of human immunodeliciency virus type-1 expressoin by a hairpin ribozyme, Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992)
Lite	Sarver, Nava et al., Ribozymes as potential anti-HIV-1 therapeutic agents, Science (1990) Vol. 247, pp 1222-1225
24	Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595
27	Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993)
<u> </u>	Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (G)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991)
34	Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12
ds	Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-3255, (1993)
حگ	Weerasinghe, Migara et al., Resistance to human immunodeficiency virus type 1 (HIV-1) infection in human CD4 lymphocyte-derived cell lines conferred by using retroviral vectors expressing an HIG-1 RNA-specific ribozyme, Journal of Virology, Vol 65, pp 5531-5534, No. 10 (1991)
WE	Xia, et al., sIRNA-mediated gene silencing in vitro and in vivo, Nature Biotechnology 20: pp 1006-1010 (Oct. 2002)
JW	Yamamoto, A, et al., Reversal of neuropathology and motor dysfunction in a conditional model of Huntington's Disease, Cell Vol. 101: pp 57-66 (2000)

Low EXAMINER	9/19/05 Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communciation to applicant.

* - Reference Previously cited and provided to the Examiner. + - New Reference not previously cited (available copies included).

3,	Yu et al., A hairpin riboyzme inhibits expression of diverse strains of human immunodeficiency virus type 1, Proc. Natl. Acad Sci. USA, Vol 90, pp 6340-6344 (July 1993)
1W	Yu, Jenn-Yah et al., RNA interference by expression of short-interfering RNAs and hairpin RNAs in mammalian cells, PNAS, April 30, 2002, Vol. 99, No. 9, pp 6047-6052

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

* - Reference Previously cited and provided to the Examiner.

INFORMATION
DISCLOSURE
STATEMENT

THE P STUE

Atty Docket No: P11089.00	Serial No.:	10/721,693
Applicant(s): William F. Ka	aemmerer	
Filing Date: 25-Nov-03	Group:	0

US PATENT DOCUMENTS

<u></u>		1.5°	JOLAI	ENI DOCUMENTS			
Examiner Initial	+ / *	Document Number	Date	Name of Patentee or Applicant of Cited Document	Class	SubClass	Filing Date If Appropriate
よる		US 2001/0027309 A1	04-Oct-01	Elsberry, Dennis D.			01-Jun-01
		US 2002/0068093 A1	06-Jun-02	Trogolo, Jeffrey A., et al	424/618		29-Aug-01
		US 4683195	28-Jul-87	Mullis, Kary B., et al	435/6		07-Feb-86
		US 4683202	28-Jul-87	Mullis, Kary B.	435/91		25-Oct-85
		US 4800159	24-Jan-89	Mullis, Kary B., et al	435/172.3		17-Dec-86
		US 4965188	23-Oct-90	Mullis, Kary B. et al	435/6		17-Jun-87
		US 5354326	11-Oct-94	Comben, Richard H. et al	607/115		27-Jan-93
		US 5624803	29-Apr-97	Noonberg, Sarah et al	435/6		13-Oct-94
		US 5720720	24-Feb-98	Laske, et al.	604/49		15-Mar-96
		US 5735814	07-Apr-98	Elsberry, Dennis D. et al.	604/43		30-Apr-96
		US 5782892	21-Jul-98	Castle, Vernon P. et al	607/37		25-Apr-97
		US 5814014	29-Sep-98	Elsberry, Dennis D., et al.	604/43		29-Jul-97
		US 6042579	28-Mar-00	Elsberry, Dennis D., et al.	604/891.1		30-Apr-97
		US 6093180	25-Jul-00	Elsberry, Dennis D.	604/506		18-Aug-97
		US 6180613	30-Jan-01	Kaplitt, et al.	514/44		06-Jun-95
		US 6187906	13-Feb-01	Gluckman, et al.	530/331		15-Jun-99
		US 6245884	12-Jun-01	Hook, Vivian Y.H.	530/300		16-Oct-98
		US 6281009	28-Aug-01	Boyce, Frederick M.	435/321.0		11-Sep-97
		US 6300539	09-Oct-01	Morris, Christopher M.	800/9		
		US 6310058	30-Oct-01	Miller, et al.	514/212.08	- 	25-May-00
		US 6313268	06-Nov-01	Hook, vivian Y.H.	530/350		20-Apr-99
		US 6319905	20-Nov-01	Mandel, et al.	514/44		19-May-99
1		US 6343233 B1	29-Jan-02	Werner, Robert 1., et al	607/119		09-Sep-98
		US 6372721	16-Apr-02	Neuman, et al.	514/44		30-Sep-99
		US 6376471	23-Apr-02	Lawrence, III, et al.	514/44		08-Oct-98
		US 6436392	20-Aug-02	Engelhardt, et al.	424/93.2		25-Mar-99
		US 6468524	22-Oct-02	Chiorini, John A.	424/93.21		22-Mar-00
$\Box JJ^{}$		US 6551290	22-Apr-03	Elsberry, et al.			31-Mar-00
W		US 6594880	22-Jul-03	Elsberry, Dennis			23-May-01
				<u> </u>			

Jalua MINER	9/19/05	Da	ate Considered	

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communciation to applicant.

* - Reference Previously cited and provided to the Examiner.

FOREIGN PATENT DOCUMENTS

Examiner Initial	+/*	Document Number	Date	Name	Class	SubClass	Filing Date If Appropriate
SW S		DE19910340	21-Sep-00	Froelich, J.C., (English Abstract)			
		WO 00/30567	02-Jun-00	Healthshield Technologies, Inc.			16-Nov-99
V		WO 00/64505	02-Nov-05	Healthshield Technologies, L.L.C.			27-Apr-00
JW		WO 01/16312A2	08-Mar-01	Ribozyme Pharmaceuticals, Inc.	C12N 15/11		30-Aug-00
SW		WO 01/49844 A1	12-Jul-01	Rutgers, The State Univ of NJ	C12N 15/11		02-Jan-01
JU		WO 01/60794A2	23-Aug-01	The Regents of the Univ of CA	C07D		20-Feb-01
-)		WO 01/91801 A2	06-Dec-01	Chiron Corporation	A61K 48/00		25-May-01
		WO 03/047676 A1	12-Jun-03	Medtronic, Inc.	A61M 25/00		26-Nov-02
		WO 03/053516 A1	03-Jul-03	Medtronic, Inc.	A61N 1/375		18-Dec-02
		WO 03/070895 A2	28-Aug-03	Ribozyme Pharmaceuticals	C12N		18-Feb-03
V		WO 03/099298 A1	04-Dec-03	Max-Planck Gesellschaft Zur Forderung Der Wissenschaften E.V.	A61K 31/7105		26-May-03
24		WO 93/23569	25-Nov-93	Ribozyme Pharmaceuticals, Inc.	C12Q 1/68		29-Apr-93
WE		WO 94/02595	03-Feb-94	Ribozyme Pharmaceuticals, Inc.	C12N 5/22		02-Jul-93
لاك		WO 9618736	20-Jun-96	Ribozyme Pharmaceuticals, Inc.	C12N 15/52		22-Nov-95
SW		WO 97/40874	06-Nov-97	Medtronic, Inc.	A61M 5/172,		30-Apr-97
WE		WO 99/50300A1	07-Oct-99	The Trustees of the Univ of PA	C07K 16/00		29-Mar-99
<u>ا</u> ل		WO2004/084955	07-Oct-04	Medtronic, Inc.		······································	18-Mar-04
77		WO2004/101063	25-Nov-04	Medtronic, Inc.	į		08-Mar-04
SN.		WO2004041101	21-May-04	Medtronic, Inc.		•	27-Oct-03

OTHER DOCUMENTS (Including Authors, title, Date, Pertinent Papers, etc.)

		ative diseases: the delivery issue, TRENDS in
eurosciences, voi 24, 110. 9, Sep	tember 2001 pp 533-540	
AMINER /	9/19/05	Date Considered
	TMINER	

conformance and not considered. Include copy of this form with next communciation to applicant.

* - Reference Previously cited and provided to the Examiner.

+ - New Reference not previously cited (available copies included).

Based on Form PTO-FB-A820 (Also form PTO-1449)

fw	Caplen, Natasha J., et al.,, Rescue of polyglutamine-mediaed cytotoxicity by double-stranded RNA-mediated RNA Interference, Human Molecular Genetics 11(2): 175-184 (2002)
	Chen et al., Multitasrget-ribozyme directed to cleave at up to nine highly conserved HIV-1 env RNA regions inhibits HIV-1 replication-potential effectiveness against most presently sequened HIV-1 isolates, Nucleic Acids Res., 20, 4581-4589, (1992)
	Chowrira et al., In vitro and in vivo comparison of Hammerhead, Hairpin and Hepatitis delta Virus Self- Processing Ribozyme Cassettes, Journal Biol. Chemistry, 269, pp 25856 - 25863 (1994)
	Clark, H., et al., Purkinji Cell Expression of a Mutant Allele of SCA1 in transgenic mice leads to disparate effects on motor behaviorsk, followed by a proigressive cerebellar dysfunction and histological alterations, Journal of Neuroscience Vol 17 No. 19: pp 7385-7395 (1997)
	Couture et al., Anti-gene therapy; the use of ribozymes to inhibit gene function, Trends in Genetics, 12(12); 510-515 (Dec, 1996)
and the state of t	Davidson, Beverly L., Molecular medicine for the brain: silencing of disease genes with RNA interference, The Lancet Neurology, Vol 3, March 2004, pp 145-149
	Dropulic et al., Functional characterization of a U5 Ribozyme: Intracellular Suppression of Human Immunodeficiency virus Type I Expression, Journal Virology., 66(1), 1432-1441 (1992)
	Glorioso, Joseph C., Use of HSV vectors to modify the nervous system, Current Opinion in Drug Discovery & Development 2002 5(2): PharmaPress Ltd ISSN 1367-6733
	Good, et al., Expression of small, therapeutic RNAs in human cell nuclei, Gene Therapy, (1997) Vol. 4, No. 45 - 54
	Goto, J., et al., Suppression of Huntingtin Gene Expression by sIRNA: A Possible therapeutic Tool for Huntington's Disease, Neurology, Lippincoll Williams 7 Wilkins, Philadelphia, US, 60(5) Suppl 1, March 11 2003 p.A286
	Hommel, J.D., et al., Local gene knockdown in the brain using viral-mediated RNA interference, Society for Neuroscience Abstract Viewer and Itinerary Planner 2003, Vol 2003, Abstract No. 325.14, November 8-12, 2003
	Izant, Jonathan G., et al., Constitutive and Conditional Suppression of Exogenous and Endogenous Genes by Anti-Sense RNA, Science Vol 229, pp 345 (1985)
	Kaemmerer, W.F. and Puram, S., The potential for allele-specific reduction of ataxin1 expression using small, interfering RNA,
	Kashani-Sabet et al., Reversal of the Malignant Phenotype by an Anti-ras Ribozyme, Antisense Res. Dev., 2:3-15 (1992)
	Kitabwalla, Moiz, Ph.D., et al., RNA interfence - a new weapon against HIV and beyond, New England Journal of Medicine, 347(17), (Oct 24 2002) pp 1364-1367
	Klement, Ivan, et al., Ataxin-1 nuclear localization and aggregation: Role in polyglutamine-induced disease in SCA1 transgenic mice, Cell Vol. 95: pp 41-53 (1998)
	L'Huillier, Phillip J., et al., Cytoplasmic delivery of ribozymes leads to efficient reduction in x-lactalbumin mRNA levels in C1271 mouse cells, EMBO Journal, Vol. 11, pp 4411-4418, No. 12 (1992)
V	Lisziewicz et al., Inhibition of human immunodeficiency virus type 1 replication by regulated expression of a polymeric Tat activation response RNA decoy as a strategy for gene therapy in AIDS, Proc. National Acad Sci USA, Vol 90, pp 8000-8004, (Sept. 1993)

Date Considered

Examiner: initial if reference considered, whether or not citation is in conformance with MPEP609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

* - Reference Previously cited and provided to the Examiner.

Matilla, A., et al., Mice lacking ataxin-1 display learning deficits and decreased hippocampal paired-pulse facilitation, Journal of Neuroscience Vo. 18: pp 5508-5516 (998) No. 14 McGarry, Thomas J., et al., Inhibition of heat shock protein synthesis by heat-inducible antisense RNA, Proc. National Academy Science, USA Vol 83, pp 399, Jan. 1986 McManus, Michael T., Gene Silencing in Mammals by Small Interfering RNAs, Nature Reviews / Genetics, Vol. 3 October 2002, pp737-747 Miller, Victor M., Allele-specific silencing of dominant disease genes, PNAS, June 10, 2003, Vol. 100, No. 12, pp 7195-7200 Natidini, Luigl, Efficient transfer, integration and sustained long-term expression of the transgene in adult rat brains injected with a lentiviral vector, Proc. National Academy Science, Vol. 93, pp 11382-11388, October 1996 Noonberg, et al., In vivo generation of highly abundant sequence-specific digonucleotides for antisense and triplez gene regulation, Nucleic Acid Research, Vol. 22, pp 2830 - 2836, No. 14 (1994) Ohkawa, et al., Activities of HIV-RNA targeted riboyzmes transcribed from a shot-gun type riboyzme-trimming plasmid, Nucleic Acids Symp. Ser., 27, pp 15-16, (1992) Ojwang, Joshua O., et al., Inhibition of human immunodeficiency virus type-1 expressoin by a hairpin ribozyme, Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992) Sarver, Nava et al., Ribozyme-mediated cleavage of e-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Scanlon, K.J., et al., Ribozyme-mediated cleavage of e-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sarver, Nava et al., Robozyme-mediated cleavage of e-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitr
McGarry, Thomas J., et al., Inhibition of heat shock protein synthesis by heat-inducible antisense RNA, Proc. National Academy Science, USA Vol 83, pp 399, Jan. 1986 McManus, Michael T., Gene Silencing in Mammals by Small Interfering RNAs, Nature Reviews / Genetics, Vol. 3 October 2002, pp737-747 Miller, Victor M., Allele-specific silencing of dominant disease genes, PNAS, June 10, 2003, Vol. 100, No. 12, pp 7195-7200 Naldinl, Luigl, Efficient transfer, integration and sustained long-term expression of the transgene in adult rat brains injected with a lentiviral vector, Proc. National Academy Science, Vol. 93, pp 11382-11388, October 1996 Noonberg, et al., In vivo generation of highly abundant sequence-specific oligonucleotides for antisense and triplex gene regulation, Nucleic Acid Research, Vol. 22, pp 2830 - 2836, No. 14 (1994) Ohkawa, et al., Activities of HIV-RNA targeted riboyzmes transcribed from a shot-gun type riboyzme-trimming plasmid, Nucleic Acids Symp. Ser., 27, pp 15-16, (1992) Ojwang, Joshua O., et al., Inhibition of human immunodeficiency virus type-I expression by a hairpin ribozyme, Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992) Sarver, Nava et al., Ribozymes as potential anti-HIV-I therapeutic agents, Science (1990) Vol. 247, pp 1222-1225 Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (C)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nu
October 2002, pp737-747 Miller, Victor M., Allele-specific silencing of dominant disease genes, PNAS, June 10, 2003, Vol. 100, No. 12, pp 7195-7200 Naldini, Luigi, Efficient transfer, integration and sustained long-term expression of the transgene in adult rat brains injected with a lentiviral vector, Proc. National Academy Science, Vol. 93, pp 11382-11388, October 1996 Noonberg, et al., In vivo generation of highly abundant sequence-specific oligonucleotides for antisense and triplex gene regulation, Nucleic Acid Research, Vol. 22, pp 2830 - 2836, No. 14 (1994) Ohkawa, et al., Activities of HIV-RNA targeted riboyzmes transcribed from a shot-gun type riboyzme-trimming plasmid, Nucleic Acids Symp. Ser., 27, pp 15-16, (1992) Ojwang, Joshua O., et al., Inhibition of human immunodeficiency virus type-1 expressolo by a hairpin ribozyme, Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992) Sarver, Nava et al., Ribozymes as potential anti-HIV-1 therapeutic agents, Science (1990) Vol. 247, pp 1222-1225 Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (C)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12
Naldinl, Luigl, Efficient transfer, integration and sustained long-term expression of the transgene in adult rat brains injected with a lentiviral vector, Proc. National Academy Science, Vol. 93, pp 11382-11388, October 1996 Noonberg, et al., In vivo generation of highly abundant sequence-specific oligonucleotides for antisense and triplex gene regulation, Nucleic Acid Research, Vol. 22, pp 2830 - 2836, No. 14 (1994) Ohkawa, et al., Activities of HIV-RNA targeted riboyzmes transcribed from a shot-gun type riboyzme-trimming plasmid, Nucleic Acids Symp. Ser., 27, pp 15-16, (1992) Ojwang, Joshua O., et al., Inhibition of human immunodeficiency virus type-1 expressoin by a hairpin ribozyme, Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992) Sarver, Nava et al., Ribozymes as potential anti-HIV-1 therapeutic agents, Science (1990) Vol. 247, pp 1222-1225 Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (C)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
brains injected with a lentiviral vector, Proc. National Academy Science, Vol. 93, pp 11382-11388, October 1996 Noonberg, et al., In vivo generation of highly abundant sequence-specific oligonucleotides for antisense and triplex gene regulation, Nucleic Acid Research, Vol. 22, pp 2830 - 2836, No. 14 (1994) Ohkawa, et al., Activities of HIV-RNA targeted riboyzmes transcribed from a shot-gun type riboyzme-trimming plasmid, Nucleic Acids Symp. Ser., 27, pp 15-16, (1992) Ojwang, Joshua O., et al., Inhibition of human immunodeficiency virus type-1 expressoin by a hairpin ribozyme, Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992) Sarver, Nava et al., Ribozymes as potential anti-HIV-1 therapeutic agents, Science (1990) Vol. 247, pp 1222-1225 Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (G)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
triplex gene regulation, Nucleic Acid Research, Vol. 22, pp 2830 - 2836, No. 14 (1994) Ohkawa, et al., Activities of HIV-RNA targeted riboyzmes transcribed from a shot-gun type riboyzme-trimming plasmid, Nucleic Acids Symp. Ser., 27, pp 15-16, (1992) Ojwang, Joshua O., et al., Inhibition of human immunodeficiency virus type-1 expressoin by a hairpin ribozyme, Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992) Sarver, Nava et al., Ribozymes as potential anti-HIV-1 therapeutic agents, Science (1990) Vol. 247, pp 1222-1225 Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (G-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
plasmid, Nucleic Acids Symp. Ser., 27, pp 15-16, (1992) Ojwang, Joshua O., et al., Inhibition of human immunodeficiency virus type-1 expressoin by a hairpin ribozyme, Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992) Sarver, Nava et al., Ribozymes as potential anti-HIV-1 therapeutic agents, Science (1990) Vol. 247, pp 1222-1225 Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (G)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
Proc. National Academy Science USA, Vol 89, pp 10802-10806 (1992) Sarver, Nava et al., Ribozymes as potential anti-HIV-1 therapeutic agents, Science (1990) Vol. 247, pp 1222-1225 Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (G)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
Scanlon, K.J., et al., Ribozyme-mediated cleavage of c-fos mRNA rduces gene expression of DNA synthesis enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (G)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
enzymes and metallothionein, Proc. National Academy Science USA, 88, (1991) 10591-10595 Sullenger, Bruce and Cech, Thomas R., Tethering Ribozymes to a Retroviral Packaging Signal for Destruction of Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (G)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
Viral RNA, Science, Vol. 262, p 1566 (12/03/1993) Taira et al., Construction of a Novel RNA-transcrip-trimming Plasmid which can be used both In vitro in Place of Run-off and (G)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
of Run-off and (G)-free Transcriptions and in vivo as Multi-sequences Transcription Vectors, Nucleic Acids Res., 19(19), p. 5125-5130 (1991) Thompson, James D., et al., Improved accumulation and activity of ribozymes expressed from a tRNA-based RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
RNA polymerase III promoter, Nucleic Acids Res., (1995) Vol 23, pp 2259, No. 12 Ventura et al., Activation of HIV-specific Ribozyme Activity by Self-Cleavage, Nucleic Acids Res., 21(14); 3249-
Weerasinghe, Migara et al., Resistance to human immunodeficiency virus type 1 (HIV-1) infection in human CD4 lymphocyte-derived cell lines conferred by using retroviral vectors expressing an HIG-1 RNA-specific ribozyme, Journal of Virology, Vol 65, pp 5531-5534, No. 10 (1991)
Xia, et al., s1RNA-mediated gene silencing in vitro and in vivo, Nature Biotechnology 20: pp 1006-1010 (Oct. 2002)
Yamamoto, A, et al., Reversal of neuropathology and motor dysfunction in a conditional model of Huntington's Disease, Cell Vol. 101: pp 57-66 (2000)
Yu et al., A hairpin riboyzme inhibits expression of diverse strains of human immunodeficiency virus type 1, Proc. Natl. Acad Sci. USA, Vol 90, pp 6340-6344 (July 1993)

MINER **Date Considered** Examiner: Iultial if reference considered, whether or not citation is in conformance with MPEP609: Draw line through citation if not in

conformance and not considered. Include copy of this form with next communication to applicant.

* - Reference Previously cited and provided to the Examiner.



Yu, Jenn-Yah et al., RNA interference by expression of short-interfering RNAs and hairpin RNAs in mammalian cells, PNAS, April 30, 2002, Vol. 99, No. 9, pp 6047-6052

EXAMINER VIOLEN

9/19/05

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

* - Reference Previously cited and provided to the Examiner.

+ - New Reference and previously cited (available copies included).

Based on Form PTO-FB-A820 (Also form PTO-1449)